

IMA
Commission on Applied Mineralogy (CAM)
Report of Activities
Four year report (1998-2002)

17th IMA meeting at Toronto, Ontario, Canada in 1998.

CAM sponsored two sessions titled:

A) Applied Mineralogy: Extractive and Metallurgical Processes

B) Applied Mineralogy of Ceramics and Cements.

The two sessions included a total of 26 papers on applied mineralogy, some of them published in a special issue of the Journal of Mineralogy and Petrology.

International Congress on Applied Mineralogy (ICAM) held in Göttingen, Germany in July 2000.

IMA-Commission on Applied Mineralogy (CAM) was one of several groups that helped co-sponsor the quadrennial International Congress on Applied Mineralogy (ICAM) meeting in Göttingen, Germany on July 17-19, 2000. The meeting was outstandingly successful, and was well-attended with 305 participants from 35 countries. A total of 201 oral papers together with 120 posters were presented at the meeting.

The meeting was noteworthy for its inclusion of sessions on mineralogical applications in advanced materials and to the medical fields, topics that had received much less attention at earlier ICAM meetings. Applied mineralogy papers were grouped into six areas, including applications to: 1) Advanced Materials, 2) Mineral Surfaces, 3) Mining and Metallurgy, 4) Environmental Problems, 5) Materials, and 6) Cultural Heritage. Three plenary lectures dealt with: 1) near-industry research for exploration and mining, 2) archaeometry in the 21st century, and 3) molecular mechanisms in smart materials. A total of 21 invited lectures dealt with topics such as: 1) mineralogy and applications of natural zeolites, 2) mineralogy and geochemistry of acid mine waters, 3) kinetics of glass transition, 4) role of geochemistry in safety assessments of nuclear waste repositories, 5) environmental mineralogy, 6) mineralogical transformations in coal utilization by-products, 7) plate tectonic controls for gemstone occurrences, 8) mineralogy of ashes, slag, and residues, 9) materials for medical devices, and 10) mineral synthesis in the development of high-tech materials.

A two-volume hard-cover proceedings set titled "Applied Mineralogy in Research, Economy, Technology, Ecology, and Culture" is available from: A.A. Balkema, P.O. Box 1675, 3000 BR Rotterdam, Netherlands (E-mail:

balkema@balkema.nl; Internet site: www.balkema.nl). The two volumes include 117 papers, encompass 1048 pages, and are edited by D. Rammlair, J. Mederer, Th. Oberthür, R. B. Heimann, and H. Pentinghaus.

At the ICAM business meeting in Göttingen, it was agreed to continue the procedure, first determined at the 1993 ICAM meeting in Fremantle, Western Australia by applied mineralogists from IMA and ICAM, in which ICAM will hold its quadrennial meetings at the half-way point between the quadrennial meetings of IMA. It was further agreed that IMA-CAM would participate in the sponsorship of those ICAM meetings or in some of the sessions at the

ICAM meetings. In a reciprocal arrangement, ICAM would sponsor some or all of the CAM-sponsored sessions at the quadrennial IMA meetings.

International Geological Congress (31 IGC) in Rio de Janeiro, Brazil, 2000

CAM-sponsored the session 8.1 - Applied Mineralogy with a total of 58 papers on applied mineralogy. Five selected papers were presented in an oral session and the others in a poster session.

18th IMA meeting at Edinburgh, UK

CAM sponsored three sessions titled:

- A. Session 13: Gem materials. CAM co-sponsored this from the Commission on Gem Minerals (15 papers, with 8 presented at oral session);
- B. Session 14: General Mineralogy which included the initial proposal session "Cathodoluminescence Microscopy Applied to Gemstones and other Minerals" (24 papers, with 8 presented at oral session);
- C. Session 33: Applied Mineralogy with 15 papers (6 presented at oral session).

The organizers of the 18th IMA meeting did not support the agreement collaboration between CAM and ICAM - International Council for applied Mineralogy with regard to of co-sponsoring of sessions on applied mineralogy at the quadrennial meetings of IMA and ICAM, so there wasn't any session co-sponsored by ICAM.

Short Courses sponsored by CAM:

- **Applied Mineralogy of Mineral Raw Materials.**

The short courses have been taught on an annual basis since 1999 to 24 participants in 1999, 28 participants in 2000, 29 participants in 2001 and 11 participants in 2002.

The courses organized by Henrique Kahn were held at University of Sao Paulo, Brazil. The topics included: review of mineralogy and crystal chemistry concepts; concepts and interfaces with other areas of Mineral Technology; basic concepts on mineral process and uses of mineral raw materials; laboratory sample preparation procedures; particle size analysis - techniques and results presentation; mineral separation techniques; microscopy techniques and mineral identification (optical and electron scanning techniques); analytical instrumental techniques: XRD, XRF, AAS, ICP-AES, FTIR, DTA/DTG; analysis and results interpretation, separability curves; case studies of Ni sulphide ore, feldspar for glass industry, bauxite and phosphate ores.